Compact Digital Holographic Memory

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Abstract

Recent technical progress in developing a compact digital holographic memory system is presented. Due to rapid advancement in data input and output devices, electro-optic beam steering technology, and diode laser source, a compact holographic memory brassboard for digital data storage has been integrated. The system consist of a 1 Meg pixel binary spatial light modulator, a PI beam steering mirror, a CMOS photo sensor, a $LiNbO_3$ photorefractive crystal, and a blue laser source. The system architecture and experimental test data will be discussed. An overview of the holographic data storage technology will also be discussed.